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(21) International Application Number: PCT/US99/20997 (22) International Filing Date: 13 September 1999 (13.09.99) (30) Priority Data: 60/100,179 14 September 1998 (14.09.98) US (71) Applicant (for all designated States except US): LUCID, INC. [US/US]; 235 Middle Road, Henrietta, NY 14467 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): ZAVISLAN, James, M. [US/US]; 5 Wandering Trail, Pittsford, NY 14534 (US). GREENWALD, Roger, J. [US/US]; 16787 Ridge Road, Holley, NY 14470 (US). (74) Agent: LUKACHER, Kenneth, J.; Harris Beach & Wilcox, LLP, The Granite Building, 130 East Main Street, Rochester, NY 14604-1687 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: IMAGING OF SURGICAL BIOPSIES		
(57) Abstract <p>In order to determine, rapidly and without the delay required by conventional tissue preparation techniques for pathological examination (freezing, sectioning, staining, etc.), whether, an excision, which may be a biopsy sample, is representative of the morphology of interest of whether an excisional biopsy in which the tissue taken completely removes the abnormality is, in either case, the tissue which is desired to be excised, the tissue specimen (18) is encapsulated, preferably as part of the biopsy procedure. The encapsulated tissue is contained in an optically transparent cassette (34). The cassette (34) or an endcap (38) enclosing the cassette is marked with a fiducial (40) indicating and corresponding to the location of the excision on the patient's body. An image, which is preferably a representation of a surface of the tissue specimen and the vertical section(s) area of the tissue internal of the specimen and adjacent to a surface thereof, is obtained by means of an electro-optical imaging system (10), preferably a confocal laser scanning microscope. The cassette is moved, preferably in a stage (22) which rotates the cassette while translating it, so that the head (12) of the confocal microscope (its objective lens) provides a linear scan in a direction perpendicular to the wall of the cassette (also perpendicular to the surface of the tissue encapsulated in the cassette). The display (28) from the microscope indicates the morphology at and in proximity to the surface of the specimen as well as the location thereof. The pathologist and the surgeon is thereby provided with information concerning the specimen and whether the entire abnormality desired to be removed has indeed been removed and/or whether the biopsy is representative of the body region of interest in the case of a biopsy sample.</p>		